

ABSTRACT OF THE DISCLOSURE

Brightness information of, e.g., an average value of brightnesses at an X-ray image of a first connected part when an electronic component (422) is mounted onto only one face of a printed board (421) is obtained. Binary images of an X-ray image of the board with the electronic components mounted to both faces are formed by an upper and a lower levels relative to the brightness information. The binary images are synthesized with each other so as to extract an image of only a second connected part. The image of only the second connected part can be obtained in this manner on the basis of the X-ray image of the double face-mounted board, so that an accuracy for connection inspection is improved in comparison with the related art. Also, a relationship between a density in the X-ray image of the connected part and a thickness of the connected part is obtained beforehand, based on which a plurality of thickness images are obtained for a plurality of X-ray images of different image storage times. The connected part can be inspected by synthesizing the images.